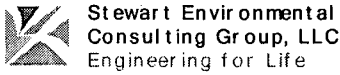


From: Dave Stewart <Dave.Stewart@stewartenv.com>
Sent: Monday, November 27, 2017 8:05 AM
To: Stovall - CDPHE, Curtis; Dave Folkes
Cc: Ackerman, Joyce; Walker - CDPHE, David; Thomas J. Krasovec; Richard Dean
Subject: RE: drill cutting disposal
Attachments: image001.emz

Curt, I believe it was MW-2R, nor MW-28. Thank you. All IDW will be disposed of at the Front Range Landfill except for MW-2 and MW-2R.

Dave



David R Stewart, PhD, PE
President and CEO
Stewart Environmental Consulting Group, LLC
748 Whalers Way, Suite 210
Fort Collins, Colorado 80525
t: 970-226-5500
c: 970-217-6501
f: 970-226-4946
e: dave.stewart@stewartenv.com
w: www.stewartenv.com

From: Stovall - CDPHE, Curtis [<mailto:curtis.stovall@state.co.us>]
Sent: Monday, November 27, 2017 6:52 AM
To: Dave Folkes
Cc: Ackerman, Joyce; Walker - CDPHE, David; Thomas J. Krasovec; Dave Stewart; Richard Dean
Subject: Re: drill cutting disposal

Hi Dave,

Yes, non-hazardous drill cuttings can be disposed at any solid waste landfill permitted to accept non-hazardous contaminated soil, including Front Range Landfill. Uncontaminated soil can be handled as environmental media and can be spread out on the ground. Also, there is not an MW-28. Perhaps you intended to indicate MW-13 rather than MW-28?

Thanks,
Curt

On Sat, Nov 25, 2017 at 3:58 PM, Dave Folkes <DFolkes@geosyntec.com> wrote:

Hi Joyce, Curt, and Dave,

Stratus would like to dispose of non-hazardous drill cuttings, currently stored on site in the drums we saw, at Front Range landfill. I understand that Curt was previously OK with this, based on the results of soil samples from nearby test pits submitted by Stewart Environmental earlier this year (see below). We are assuming these non-hazardous soils would be managed outside of the AOC. However, we propose managing the cuttings from MW-2 and MW-28, which had high PID levels, along with other contaminated soils during our upcoming removal action under the AOC.

I just want to make sure this approach for managing the drill cuttings is OK with both CDPHE and EPA.

Let me know if either of you would like to discuss this further – otherwise, Stratus would be able to remove and dispose of the non-hazardous drums at Front Range on Monday, pending your approval.

Best, Dave

Parameter	Soil Testing (Quest), Pond Sedimen					
	Quest MW-9 Soil	Pond Sediment Sample	Test Pit 1 - 5 to 6 ft	Test Pit 2 - 5 to 6 ft	Test Pit 3	Test Pit 4
	16-Apr	22-Feb	17-Jan	17-Jan	17-Jan	17-Jan
VOC's (Method 8260)			All Values a			
1,4-Dichlorobenzene	0.015	<1	<0.17	<0.17	No sample - no indication of organics	No sample - no indication of organics
Cis-1,2-DCE	0.016	<1	<0.17	<0.17		
1-1, DCE	ND	<1	<0.17	<0.17		
Isopropylbenzene	ND	<1	<0.17	<0.17		
Isopropyltoluene, 4-	ND	<1	<0.17	<0.17		
Trimethylbenzene, 1,2,4-	ND	<1	<0.17	<0.17		
Trimethylbenzene, 1,3,5-	ND	<1	<0.17	<0.17		
2-Butanone (MEK)	ND	<1	30.5	41.7		
butylbenzene, n-	ND	<1	<0.17	<0.17		
Trichloroethylene (TCE)	0.020	<1	0.217	<0.17		
Toluene	ND	<1	0.185	18.6		
Tetrachloroethylene (Perc)	ND	<1	<0.17	<0.17		
Tetrahydrofuran (TFA)	ND	<1	<0.17	<0.17		

Vinyl Chloride	ND	<1	<0.17	<0.17		
Xylenes - Total	ND	<1	<0.17	<0.17		
Remaining VOC's are ND	ND	<1	<0.17	<0.17		

SOC's (Method 8270)	All Values at					
1,4 - Dioxane	NA	<8	NA	NA	No Sample - no indiciation of organics	No Sample - no indiciation of organics
Benzoic Acid	NA	<80	NA	NA		
Bencyl alcohol	NA	<8	NA	NA		
Bis(2-ethylhexyl) phthalate	NA	<8	NA	NA		
2-Methylphenol	NA	<8	NA	NA		
Pentachlorophenol	NA	4 - J	NA	NA		
Remaining SOC's are ND	NA	<8	NA	NA		

	All Valu					
Total Organic Carbon	NA	1.50	NA	NA	NA	NA

B- Detected between MDL and PQL

David J. Folkes, P.E. (CO)

Senior Principal

Geosyntec Consultants

5670 Greenwood Plaza Blvd.

Suite 540

Greenwood Village, CO 80111

Phone: 303.790.1340

Cell: 720.560.1707

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--
Curt Stovall, P.E.
Environmental Protection Specialist
Solid Waste Permitting Unit
Solid Waste and Materials Management Program



COLORADO

Hazardous Materials
& Waste Management Division
Department of Public Health & Environment

P 303.692.2295 | F 303.759.5355
4300 Cherry Creek Drive South, Denver, Colorado 80246-1530
curtis.stovall@state.co.us | www.colorado.gov/cdphe/hm

Ackerman, Joyce

From: Stovall - CDPHE, Curtis <curtis.stovall@state.co.us>
Sent: Monday, November 27, 2017 6:52 AM
To: Dave Folkes
Cc: Ackerman, Joyce; Walker - CDPHE, David; Thomas J. Krasovec; Dave Stewart; Richard Dean
Subject: Re: drill cutting disposal

Hi Dave,

Yes, non-hazardous drill cuttings can be disposed at any solid waste landfill permitted to accept non-hazardous contaminated soil, including Front Range Landfill. Uncontaminated soil can be handled as environmental media and can be spread out on the ground. Also, there is not an MW-28. Perhaps you intended to indicate MW-13 rather than MW-28?

Thanks,
Curt

On Sat, Nov 25, 2017 at 3:58 PM, Dave Folkes <DFolkes@geosyntec.com> wrote:

Hi Joyce, Curt, and Dave,

Stratus would like to dispose of non-hazardous drill cuttings, currently stored on site in the drums we saw, at Front Range landfill. I understand that Curt was previously OK with this, based on the results of soil samples from nearby test pits submitted by Stewart Environmental earlier this year (see below). We are assuming these non-hazardous soils would be managed outside of the AOC. However, we propose managing the cuttings from MW-2 and MW-28, which had high PID levels, along with other contaminated soils during our upcoming removal action under the AOC.

I just want to make sure this approach for managing the drill cuttings is OK with both CDPHE and EPA.

Let me know if either of you would like to discuss this further – otherwise, Stratus would be able to remove and dispose of the non-hazardous drums at Front Range on Monday, pending your approval.

Best, Dave

Soil Testing (Quest), Pond Sedime

Parameter	Quest MW-9 Soil	Pond Sediment Sample	Test Pit 1 - 5 to 6 ft	Test Pit 2 - 5 to 6 ft	Test Pit 3	Test Pit 4
	16-Apr	22-Feb	17-Jan	17-Jan	17-Jan	17-Jan
VOC's (Method 8260)			All Values :			
1,4-Dichlorobenzene	0.015	<1	<0.17	<0.17	No sample - no indication of organics	No sample - no indication of organics
Cis-1,2-DCE	0.016	<1	<0.17	<0.17		
1-1, DCE	ND	<1	<0.17	<0.17		
Isopropylbenzene	ND	<1	<0.17	<0.17		
Isopropyltoluene, 4-	ND	<1	<0.17	<0.17		
Trimethylbenzene, 1,2,4-	ND	<1	<0.17	<0.17		
Trimethylbenzene, 1,3,5-	ND	<1	<0.17	<0.17		
2-Butanone (MEK)	ND	<1	30.5	41.7		
butylbenzene, n-	ND	<1	<0.17	<0.17		
Trichloroethylene (TCE)	0.020	<1	0.217	<0.17		
Toluene	ND	<1	0.185	18.6		
Tetrachloroethylene (Perc)	ND	<1	<0.17	<0.17		
Tetrahydrofuran (TFA)	ND	<1	<0.17	<0.17		
Vinyl Chloride	ND	<1	<0.17	<0.17		
Xylenes - Total	ND	<1	<0.17	<0.17		
Remaining VOC's are ND	ND	<1	<0.17	<0.17		

SOC's (Method 8270)	All Values :					
1,4 - Dioxane	NA	<8	NA	NA	No Sample - no indication of organics	No Sample - no indication of organics
Benzoic Acid	NA	<80	NA	NA		
Benzyl alcohol	NA	<8	NA	NA		
Bis(2-ethylhexyl) phthalate	NA	<8	NA	NA		
2-Methylphenol	NA	<8	NA	NA		
Pentachlorophenol	NA	4 - J	NA	NA		
Remaining SOC's are ND	NA	<8	NA	NA		

	All Values :					
Total Organic Carbon	NA	1.50	NA	NA	NA	NA

B- Detected between MDL and PQL

David J. Folkes, P.E. (CO)

Senior Principal

Geosyntec Consultants

5670 Greenwood Plaza Blvd.

Suite 540

Greenwood Village, CO 80111

Phone: 303.790.1340

Cell: 720.560.1707

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--
Curt Stovall, P.E.
Environmental Protection Specialist
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curtis.stovall@state.co.us | www.colorado.gov/cdphe/hm

From: Dave Folkes
 To: [Johnnie Joyce](#), [Curt Stratus](#), [CDPHE](#), [Waters](#), [TSD](#), [Dave](#)
 Co: [Thomas A. Joyce](#), [Curt Stratus](#), [Kathleen O'Leary](#)
 Subject: drill cutting disposal
 Date: Saturday, November 25, 2017 3:59:55 PM

Hi Joyce, Curt, and Dave,

Stratus would like to dispose of non-hazardous drill cuttings, currently stored on site in the drums we saw, at Front Range landfill. I understand that Curt was previously OK with this, based on the results of soil samples from nearby test pits submitted by Stewart Environmental earlier this year (see below). We are assuming these non-hazardous soils would be managed outside of the AOC. However, we propose managing the cuttings from MW-2 and MW-28, which had high PID levels, along with other contaminated soils during our upcoming removal action under the AOC.

I just want to make sure this approach for managing the drill cuttings is OK with both CDPHE and EPA.

Let me know if either of you would like to discuss this further – otherwise, Stratus would be able to remove and dispose of the non-hazardous drums at Front Range on Monday, pending your approval.

Best, Dave

Soil Testing (Quest), Pond Sediment and Test Pit Samples and TCLP Results

Parameter	Quest MW-9 Soil	Pond Sediment Sample	Test Pit 1 - 5 to 6 ft	Test Pit 2 - 5 to 6 ft	Test Pit 3	Test Pit 4	Test Pit 5 - Solvent Drum Sample	Test Pit 5 - Solvent Drum Sample - TCLP Result	Test Pit 4	Test Pit 4	Test Pit 8 - 5 to 6 ft	Test Pit 9 - 5 to 6 ft
	16-Apr	22-Feb	17-Jan	17-Jan	17-Jan	17-Jan	17-Jan	17-Jan	17-Jan	17-Jan	17-Jan	17-Jan
All Values are in mg/kg (ppm) Except Pond Sample (ug/l)												
VOC's (Method 8260)												
1,4-Dichlorobenzene	0.015	<1	<0.17	<0.17	No sample - no indication of organics	No sample - no indication of organics	<2,500		No sample - no indication of organics	No sample - no indication of organics	<0.17	<0.17
Cis-1,2-DCE	0.016	<1	<0.17	<0.17			<2,500				<0.17	<0.17
1-1, DCE	ND	<1	<0.17	<0.17			<2,500				<0.17	<0.17
Isopropylbenzene	ND	<1	<0.17	<0.17			<2,500				0.316	<0.17
Isopropyltoluene, 4-	ND	<1	<0.17	<0.17			<2,500				0.346	<0.17
Trimethylbenzene, 1,2,4-	ND	<1	<0.17	<0.17			<2,500				0.223	<0.17
Trimethylbenzene, 1,3,5-	ND	<1	<0.17	<0.17			<2,500				0.187	<0.17
2-Butanone (MEK)	ND	<1	30.5	41.7			530,000	26,500			41.20	28.7
butylbenzene, n-	ND	<1	<0.17	<0.17			<2,500				0.277	<0.17
Trichloroethylene (TCE)	0.020	<1	0.217	<0.17			<2,500				<0.17	<0.17
Toluene	ND	<1	0.185	18.6			2,700	135			0.280	0.200
Tetrachloroethylene (Perc)	ND	<1	<0.17	<0.17			<2,500				<0.17	<0.17
Tetrahydrofuran (TFA)	ND	<1	<0.17	<0.17			<2,500				<0.17	<0.17
Vinyl Chloride	ND	<1	<0.17	<0.17			<2,500				<0.17	<0.17
Xylenes - Total	ND	<1	<0.17	<0.17			<2,500				<0.17	<0.17
Remaining VOC's are ND	ND	<1	<0.17	<0.17			<2,500				<0.17	<0.17

All Values are in mg/kg (ppm)												
SOC's (Method 8270)												
1,4 - Dioxane	NA	<8	NA	NA	No Sample - no indication of organics	No Sample - no indication of organics	<2,000		No Sample - no indication of organics	No Sample - no indication of organics	NA	NA
Benzoic Acid	NA	<80	NA	NA			<2,000				NA	NA
Benzyl alcohol	NA	<8	NA	NA			<2,000				NA	NA
Bis(2-ethylhexyl) phthalate	NA	<8	NA	NA			<2,000				NA	NA
2-Methylphenol	NA	<8	NA	NA			<2,000				NA	NA
Pentachlorophenol	NA	4 - J	NA	NA			<1,000				NA	NA
Remaining SOC's are ND	NA	<8	NA	NA			<2,000				NA	NA

All Values are in mg/l												
Total Organic Carbon	NA	1.50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

B- Detected between MDL and PQL

David J. Folkes, P.E. (CO)

Senior Principal

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